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| 09/657,050 | 09/07/2000 | Hideaki Amano | 08038.0019 | 3841 |

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EXAMINER

PADGETT, MARIANNE L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1762

DATE MAILED: 05/08/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/657050

Applicant(s)

Amano

Examiner

M.L. Palgout

Group Art Unit

1762

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 9/7/00 + 11/30/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-8 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6 ☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

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1. Claims 1-8 are objected to or rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the claims, the intent of the "locational relationship of said waveguide to transfer direction" or similarly to "said reference point" being kept "the same" between them, is not clear for the independent claims. It would appear that a reference point can be picked wherever one wants it to be, and that something about these limitation is configured the same, or concentrically or in duplicate shifted images, etc.

Claims 2 and 3 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The performance of a film forming process or an etching process, are method limitations that provide no structural limitation to the claimed apparatus.

In claim 7, line 2 "waveguide" is objected to as lacking a correct article for showing antecedent basis; as is "a substrate" in line 5 of claim 8 or "high frequency waves" in lines 7-8, since all terms had been previously introduced.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al, in view of Sato or Yamazaki.

Wagner et al (abstract; figure 6 and 11, column 1, lines 15-40; column 4, lines 4-9; column 5, lines 2-31; column 6, lines 23-39+; column 7, lines 35-50+; column 10; lines 37-59+; column 11, lines 20-67+; column 12, lines 30-38; column 15; lines 10-40+, and 61-67 and column 16, lines 21-52) teach a multi-chamber processing apparatus with a centrally located vacuum tight transport chamber, equipped with a transport robot which treats each chamber the same, and is in a direct line with its opening/transport port. Each chamber may be individually vacuum tight ~~or~~ and while batches are discussed, the number in a batch is variable/flexible and may include only one. Wagner et al is directed to generic vacuum processing and may include various etching or coating process, where it is contemplated that at least two vacuum treatment stations be present, and that they may be the same type of station. Note that Wagner et al's symmetrical configuration suggest that like individual treatment stations would be identically configured.

Wagner et al differs from applicant's claim by not specifically teaching high frequency plasma apparatus with waveguides, however Sato et al teach a process that requires two substantially identical microwave ECR chambers (Abstract; figures 2 and 4; column 3, lines 31-40; and column 4, line 62-column 5, line 5), hence it would have been obvious for one of ordinary skill in the art to make the at least two vacuum process chamber of Wagner et al, ECR microwave

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apparatus, as Sato provides the motivation of a known process using such apparatus, and Wagner et al's technique provides efficient means for also processing previous and successive treatments of the same substrate.

Yamazaki (Figures 2-3; abstract, col. 2, lines 11-14 and 61-col. 3, line 34) teaches substantially the same as Sato, and is combined for like reasons.

4. Other art of interest includes Hasegawa et al, who has another multichamber apparatus with a central vacuum tight transport chamber, and multiple substantially identical high frequency plasma stations, but they use electrodes not waveguides.

Akahori, Kanekiyo et al and Fujimura et al are of further interest for ECR microwave plasma and use of transport arms.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M.L. Padgett whose telephone number is 308-2336. The examiner can normally be reached on M-F from about 8 am to 4:30 pm.

The fax phone number for the organization where this application or proceeding is assigned is 305-5408(Official) or 305-6078 (unofficial). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

Padgett:mv

May 3, 2002

May 7, 2002



MARIANNE PADGETT
PRIMARY EXAMINER
GROUP 1100